

Inventors: Goodlett and Keller  
Serial No.: 09/835,072  
Filed: April 13, 2001  
Page 2

Group II: Claims 19 through 29, directed to a method of determining an amino acid sequence of a polypeptide by differentially labeling two or more polypeptide mixtures;

Group III: Claims 30 through 39, directed to a method of determining an amino acid sequence of a parent polypeptide from mass spectra of two or more differentially labeled polypeptide fragments of a parent polypeptide by assigning a mass and weighting characteristic; and

Group IV: Claims 40 through 55, directed to a method of determining an amino acid sequence of a parent polypeptide from mass spectra of two or more differentially labeled polypeptide fragments of a parent polypeptide by identifying a paired signal from mass spectra.

Applicants traverse the Restriction Requirement for the reasons stated below. Nevertheless, in order to be responsive to the Office Action, Applicants elect the claims of Group II, claims 19 through 29, directed to a method of determining an amino acid sequence of a polypeptide by differentially labeling two or more polypeptide mixtures. Applicants reserve the right to pursue prosecution of the non-elected claims in a later filed

Inventors: Goodlett and Keller  
Serial No.: 09/835,072  
Filed: April 13, 2001  
Page 3

application claiming the benefit of priority of the above-identified Application.

Applicants traverse the Restriction Requirement with respect to the division of the claims of Group II from the claims of Groups I, III and IV. Applicants submit that, while the claims of Group II are patentably distinct from the claims of Groups I, III and IV, a thorough search of the elected claims of Group II will include art relevant to the claims of Groups I, III and IV. In particular, the claims of Groups I through IV are related methods directed to determining the amino acid sequence of a polypeptide using mass spectra of two or more differentially labeled polypeptides. Notably, Groups I through IV have all been classified in class 702 and subclass 27. Applicants submit that search and examination of the entire application does not pose a serious burden to the Examiner.

Applicants request that, at a minimum, Groups II and I be rejoined and examined together. While the claims of Group II are patentably distinct from the claims of Group I, the search and examination of the claims of Group II will necessarily include a search of the claims of Group I because Group II claims depend from Group I. In particular, step (b) of claim 19 in Group II states "determining an amino acid sequence of a polypeptide within said mixture using the method of claim 1." Therefore, Applicants submit that examination of Group II together with the claims of Group I would not constitute a serious burden on the Examiner.

Inventors: Goodlett and Keller  
Serial No.: 09/835,072  
Filed: April 13, 2001  
Page 4

Moreover, the claims of Group II, claims 19 to 29, while patentably distinct from the claims of Groups I, III and IV, are related such that the division of the claims into four separate groups will result in a duplicative effort by the U.S. Patent and Trademark Office. Since joint examination of claims 1-55 will not result in a serious burden on the Examiner, rejoinder of Group II with Groups I, III and IV, respectfully is requested.

The multiple Election of Species Requirements with regard to the claims of Group II set forth at page 5 of the present Office Action respectfully is traversed. Applicants respectfully submit that the multi-level character of the Election of Species Requirements with regard to the claims of Group II is improper. In particular, the multi-level election requirement first requires an election of the location of the amino acid residue and subsequent election of a particular post-translational modification state of an amino acid. It is respectfully submitted that requiring Applicants to make multi-level species elections, which effectively force Applicants to elect sub-species of sub-species is unwarranted, particularly given the lack of a serious burden on the Examiner if the species are examined together.

Nevertheless, in order to be responsive to the Office Action, Applicants elect species B, terminal amino acid residue, and species E, an amino acid without post-translational modifications. Applicant's have interpreted species E as amino acids without post-translational modifications based on the

Inventors: Goodlett and Keller  
Serial No.: 09/835,072  
Filed: April 13, 2001  
Page 5


distinction in species D explicitly reciting post-translational modifications and based on the fact that Group II claims contain amino acids that are modified in some way. For example, the claims include the use of amino acids that have been modified by the addition of a label moiety. If Applicant's interpretation of species E is incorrect, then clarification by the Examiner and issuance of a revised Species Election is respectfully requested.

**CONCLUSION**

Applicants appreciate the Examiner's reconsideration of the Restriction and Election of Species Requirements. The Examiner is invited to call the undersigned Agent or Cathryn Campbell if there are any questions regarding this application.

Respectfully submitted,

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Date

  
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